

RAW SEQUENCE LISTING ERROR REPORT

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Application Serial Number: 10/645,883

Source: 2/4/04

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.
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FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, TELEPHONE: 703-308-4212; FAX: 703-308-4221

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http://www.uspto.gov/web/offices/pac/checker/chkr41note.htm

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Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

- 1. EFS-Bio (http://www.uspto.gov/ebc/efs/downloads/documents.htm, EFS Submission User Manual cPAVE)
- 2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-145t)
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 U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two. 2011 South Clark Place, Arlington, VA 22202
- Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 4B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 10/08/03



TEWO

RAW SEQUENCE LISTING

4 <110> APPLICANT: Emini, Emilio A.

PATENT APPLICATION: US/10/645,883

DATE: 02/04/2004 TIME: 15:15:59

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Output Set: N:\CRF4\01292004\J645883,raw

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             Casimiro, Danilo R.
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             Kaslow, David C.
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             Morsy, Manal
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    16 <130> FILE REFERENCE: 21366
    18 <140> CURRENT APPLICATION NUMBER: 10/645,883
    19 <141> CURRENT FILING DATE: 2003-08-21
    21 <150> PRIOR APPLICATION NUMBER: 60/455,312
    22 <151> PRIOR FILING DATE: 2003-03-17
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RAW SEQUENCE LISTING DATE: 02/04/2004 PATENT APPLICATION: US/10/645,883 TIME: 15:16:00

Input Set : A:\21366.txt

Output Set: N:\CRF4\01292004\J645883.raw

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Input Set: A:\21366.txt

Output Set: N:\CRF4\01292004\J645883.raw

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| 924 | | | | | | acctgaaaga | |
| 925 | | | | | | tctcttgcac | |
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| 940 | | caaggtaagc | | | | | 9480 |
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Input Set : A:\21366.txt

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| 950 | cggggccagg | tcctcgagca | tgaggcggtg | gtagccgtag | aggtagcggg | acatccaggt | 10080 |
| 951 | gatgccggca | gcggtggtgg | aggcgcgcgg | gaactcgcgg | acgcggttcc | agatgttgcg | 10140 |
| 952 | cagcggcagg | aaatagtcca | tggtcggcac | ggtctggccg | gtgagacgcg | cgcagtcatt | 10200 |
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| 955 | ccgcgactaa | cgtggtattg | gcactcccgt | ctcgacccga | gcccgatagc | cgccaggata | 10380 |
| 956 | cgcgggaaga | gccctttttg | ccggccgarg | ggagtcgcta | gacttgaaag | cggccgaaaa | 10440 |
| 957 | ccccgccggg | tagtggctcg | cgcccgtagt | ctggagaagc | atcgccaggg | ttgagtcgcg | 10500 |
| 958 | gcagaacccg | gttcgcggac | ggccgcggcg | agcgggactt | ggtcaccccg | ccgatttaaa | 10560 |
| 959 | gacccacagc | cagccgactt | ctccagttac | gggagcgagc | cccctttttt | ctttttgcca | 10620 |
| 960 | | gtcctgcgcc | | | | | |
| 961 | cgtagcaggc | gccggcgcta | gccagccaca | gccacagaca | gagatggact | tggaagaggg | 10740 |
| 962 | cgaagggctg | gcgagactgg | gggcgccttc | cccggagcga | cacccccgcg | tgcagctgca | 10800 |
| 963 | | cgcccggcgt | | | | | |
| 964 | ggagcccgag | gagatgcgcg | actgccggtt | tcgggcgggc | agggagctgc | gcgagggcct | 10920 |
| 965 | ggaccgccag | cgcgtgctgc | gcgacgagga | tttcgagccg | aacgagcaga | cggggatcag | 10980 |
| 966 | ccccgcgcgc | gcgcacgtgg | cggcggccaa | cctggtgacg | gcctacgagc | agacggtgaa | 11040 |
| 967 | gcaggagcgc | aacttccaaa | agagtttcaa | caaccatgtg | cgcaccctga | tcgcgcgcga | 11100 |
| 968 | ggaggtggcc | ctgggcctga | tgcacctgtg | ggacctggcg | gaggccatcg | tgcagaaccc | 11160 |
| 969 | ggacagcaag | cctctgacgg | cgcagctgtt | cctggtggta | cagcacagca | gggacaacga | 11220 |
| 970 | ggcgttcagg | gaggcgctgc | taaacatcgc | cgagcccgag | ggtcgctggc | tgctggagct | 11280 |
| 971 | gatcaacatc | ttgcagagca | tcgtagttca | ggagcgcagc | ctgagcttgg | ccgagaaggt | 11340 |
| | | aactactcgg | | | | | |
| 973 | gacgccgtac | gtgcccatag | acaaggaggt | gaagatagac | agcttttaca | tgcgcatggc | 11460 |
| 974 | gctcaaggtg | ctgacgctga | gcgacgacct | gggcgtgtac | cgcaacgacc | gcatccacaa | 11520 |
| 975 | ggccgtgagc | gcgagccggc | ggcgcgagct | gagcgaccgc | gagctgatgc | tgagcctgcg | 11580 |
| 976 | ccgggcgctg | gtagggggcg | ccgccggcgg | cgaggagtcy | tacttcgaca | tgggggcgga | 11640 |
| 977 | cctgcattgg | cagccgagcc | ggcgcgcctt | ggaggccgcc | tacggtccag | aggacttgga | 11700 |
| 978 | tgaggaagag | gaagaggagg | aggatgcacc | cgctgcgggg | tactgacgcc | tccgtgatgt | 11760 |
| 979 | gtttttagat | gcagcaagcc | ccggaccccg | ccataagggc | ggcgctgcaa | agccagccgt | 11820 |
| 980 | ccggtctagc | atcggacgac | tgggaggctg | cgatgcaacg | catcatggcc | ctgacgaccc | 11880 |
| 981 | gcaaccccga | gtcctttaga | caacagccgc | aggccaacag | actctcggcc | attctggagg | 11940 |
| 982 | cggtggtccc | ttctcggacc | aaccccacgc | acgagaaggt | gctggcgatc | gtgaacgcgc | 12000 |
| 983 | tggcggagaa | caaggccatc | cgtcccgacg | aggccgggct | agtgtacaac | gccctgctgg | 12060 |
| 984 | agcgcgtagg | ccgctacaac | agcacaaacg | tgcagtccaa | cctggaccgg | ctggtgacgg | 12120 |
| 985 | acgtgcgcga | agccgtggcg | cagcgcgagc | ggttcaagaa | cgagggcctg | ggctcgctgg | 12180 |
| 986 | tggcgctgaa | cgccttcctg | gcgacgcagc | cggcgaacgt | gccgcgcggg | caggatgatt | 12240 |
| 987 | acaccaactt | tatcagcgcg | ctgcggctga | tggtgaccga | ggtgccccag | agcgaggtgt | 12300 |
| 988 | accagtcggg | cccggactac | tttttccaaa | ctagcagaca | gggcctgcaa | acggtgaacc | 12360 |
| 989 | tgagccaggc | tttcaagaac | ctgcgcgggc | tgtggggcgt | gcaggcgccc | gtgggcgacc | 12420 |
| 990 | ggtcgacggt | gagcagcttg | ctgacgccca | actcgcggct | gctgctgctg | ctgatcgcgc | 12480 |
| 991 | ccttcaccga | cagtggcagc | gtaaaccgca | actcgtacct | gggtcacctg | ctaacgctgt | 12540 |
| 992 | accgcgaggc | cataggccag | gcgcaggtgg | acgagcagac | cttccaggag | atcactagcg | 12600 |
| 993 | tgagccgcgc | gctggggcag | aacgacaccg | acagtctgag | ggccaccctg | aacttcttgc | 12660 |
| 994 | tgaccaatag | acagcagaag | atcccggcgc | agtacgcgct | gtcggccgag | gaggagcgca | 12720 |
| 995 | tcctgagata | tgtgcagcag | agcgtagggc | ttttcctgat | gcaggagggg | gccactccca | 12780 |
| 996 | gcgccgcgct | ggacatgacc | gcgcgcaaca | tggaacctag | catgtacgcc | gccaaccggc | 12840 |
| | | | | | | | |

RAW SEQUENCE LISTING DATE: 02/04/2004 PATENT APPLICATION: US/10/645,883 TIME: 15:16:00

Input Set : A:\21366.txt

Output Set: N:\CRF4\01292004\J645883.raw

997 cgtttatcaa taagctaatg gactacctgc atcgcgcggc gtccatgaac tcggactact 12900 998 ttaccaatge cattttgaac ceqeactqqe tteegeegee ggggttetat aegggegagt 12960 999 acgacatgcc cgaccccaac gacgggtttt tgtgggacga cgtggacagc gcggtgtttt 13020 1000 caccgaectt gcaaaagege caggaggegg tgegeacgee egegagegag ggegeggtgg 13080 1001 gtcggagccc ctttcctagc ttagggagtt tgcatagctt gccgggctct gtgaacagcg 13140 1002 gcagggtgag ccggccgcgc ttgctgggcg aggacgagta cctgaacgac tcqctgctgc 13200 1003 agccgccgcg ggtcaagaac gccatggcca ataacgggat agagagtctg gtggacaaac 13260 1004 tgaaccgctg gaagacctac gctcaggacc atagggagcc tgcgcccgcg ccgcggcgac 13320 1005 agegecaega ceggeagegg ggeetggtgt gggaegaega ggaeteggee gaegatagea 13380 1006 qcqtqttqqa cttgggcggg agcggtgggg tcaacccgat atcgcgcatc ctgcagccca 13440 1007 aactggggcg acggatgttt tgaatgcaaa ataaaactca ccaaggccat agcgtgcgtt 13500 1008 etetteettg ttagagatga ggegtgeggt ggtgtettee teteeteete eetegtacga 13560 1009 gagcgtgatg gcgcaggcga ccctggaggt tccgtttgtg cctccgcggt atatggctcc 13620 1010 tacqqaqqqc agaaacaqca ttcqttactc ggagctgqct ccqttqtacg acaccactcg 13680 1011 cgtgtacttg gtggacaaca agtcggcgga catcgcttcc ctgaactatc aaaacgacca 13740 1012 cagcaacttc ctgaccacgg tggtgcagaa caacgatttc acccccgccg aggctagcac 13800 1013 qcagacgata aattttgacg agcggtcgcg gtgggggggt gatctgaaga ccattctgca 13860 1014 caccaacatg cccaatgtga acgagtacat gttcaccagc aagtttaagg cgcgggtgat 13920 1015 ggtggctaga aaacacccac agggggtaga agcaacagat ttaagcaagg atatettaga 13980 1016 gtatgagtgg tttgagttta ccctgcccga gggcaacttt tccgagacca tgaccataga 14040 1017 cctgatgaac aacqccatct tqqaaaacta cttgcaagtg gggcggcaaa atggcgtgct 14100 1018 ggagagcgat attggagtca agtttgacag cagaaatttc aagctgggct gggaccctgt 14160 1019 gaccaagetg gtgatgecag gggtetaeae etaegaggee ttteaecegg aegtggtget 14220 1020 getgeeggge tgeggggtgg actteacaga gageegeetg ageaacetee tgggeatteg 14280 1021 caaqaagcaa cctttccaag agggcttcag aatcatgtat gaggatctag aagggggcaa 14340 1022 cateceegee etgetggatg tgeccaagta ettggaaage aagaagaagt tagaggagge 14400 1023 attgqagaat qctqctaaag ctaatggtcc tgcaagagga gacagtagcg tctcaagaga 14460 1024 qqttqaaaaq qcagctgaaa aagaacttgt tattgagccc atcaagcaag atgataccaa 14520 1025 gagaagttac aacctcatcg agggaaccat ggacacgctg taccgcagct ggtacctgtc.14580 1026 ctatacctac cgggaccctg agaacggggt gcagtcgtgg acgctgctca ccaccccgga 14640 1027 cgtcacctgc ggcgcggagc aagtctactg gtcgctgccg gacctcatgc aagaccccgt 14700 1028 cacctteegt tetacecage aagteageaa ctacecegtg gteggegeeg ageteatgee 14760 1029 cttccgcgcc aagagetttt acaacgacct cgccgtctac tcccagctca tccgcagcta 14820 1030 cacetecete acceaegtet teaacegett eccegacaac cagateetet geegteegee 14880 1031 egegeeeace ateaceaceg teagtgaaaa egtgeetget eteacagate aegggaeget 14940 1032 acceptages agragatates geggagtes a gegagtgas gtcaetgas ceeptages 15000 1033 cacctqtccc tacgtctaca aggccctggg catagtcgcg ccgcgtgtgc tttccagtcg 15060 1034 caccttetaa aaaatgteta tteteatete geecageaat aacacegget ggggtattae 15120 1035 taggeceage ageatgtacg gaggagecaa gaaaegteee ageageaeee egteegegte 15180 1036 egeggeeact teegegetee gtggggeget tacaagegeg ggeggaetge cacegeegee 15240 1037 geogtgegea ceacegtega egacegteate gacteggtgg tegeogacege gegeaactat 15300 1038 actcccqccc cttcqaccqt ggacqcqqtt cattgacagc gtggtggcga cgcggcggcg 15360 1039 atatgccaga cgcaagagcc ggcgggcgga cggatcgccc aggcgccatt cggagcacgc 15420 1040 ccgccatggg gcgccgcccg agetetgetg cgccgcgcca gacgcacggg ccgccgggcc 15480 1041 atgatgcgag ccgccgccgcccact gcaccccccg caggcaggac tcgcagacga 15540 1042 geggeegeeg eegeegeege ggeeatetet ageatgacea gacceaggeg eggaaaegtg 15600 1043 tactgggtgc gcgactccgt cacgggcgtg cgcgtgcccg tgcgcacccg tcctcctcgt 15660 1044 ccctgatcta atgcttgtgt cctcccccgc aagcgacgat gtcaaagcgc atctacaaga 15720 1045 gagatgetee aggtegtege eeeggagatt taeggaceae eecaggegga eeagaaaeee 15780

PATENT APPLICATION: US/10/645,883

DATE: 02/04/2004 TIME: 15:16:00

Input Set : A:\21366.txt

| | | | | | | | 15040 |
|------|------------|------------|-------------|------------|------------|------------|-------|
| 1046 | cgcaaaatca | agcgggttaa | aaaaaaggat | gaggtggacg | agggggcagt | agagtttgtg | 15000 |
| 1047 | cgcgagttcg | ctccgcggcg | gcgcgtaaat | tggaaggggc | gcaggtgcac | gcgtgttgcg | 15060 |
| 1048 | gcccggcacg | gcggtggtgt | tcacgcccgg | cgagcggtcc | teggteagga | gcaagcgtag | 10000 |
| 1049 | ctatgacgag | gtgtacggcg | acgacgacat | cctggaccag | gcggcagagc | gggcgggcga | 16020 |
| | | | | | | tggacgagag | |
| 1051 | caatcccacg | ccgagcctga | agcccgtgac | ctgcagcagg | tgctgcccca | ggcggtgctg | 16200 |
| 1052 | ctgccgagcc | gcgggatcaa | gcgcgagggc | gagaacatgt | accegaceat | gcagatcatg | 16200 |
| 1053 | gtgcccaagc | gccggcgcgt | ggaggaagtg | ctggacaccg | tgaaaatgga | tgtggagccc | 16260 |
| 1054 | gaggtcaagg | tgcgccccat | caagcaggtg | gcgccgggcc | tgggcgtgca | gaccgtggac | 16320 |
| 1055 | attcagatcc | ccaccgacat | ggatgtcgac | aaaaaaccct | cgaccagcat | cgaggtgcag | 16380 |
| 1056 | accgacccct | ggctcccagc | ctccaccgct | accgcttcca | cttctaccgt | cgccacggtc | 16440 |
| 1057 | accgagcctc | ccaggaggcg | aagatggggc | cccgccaacc | ggctgatgcc | caactacgtg | 16500 |
| 1058 | ttgcatcctt | ccattatccc | gacgccgggc | taccgcggca | cccggtacta | cgccagccgc | 16560 |
| 1059 | aggcgcccag | ccagcaaacg | ccgccgccgc | accgccaccc | gccgccgtct | gcccccgcc | 16620 |
| 1060 | cgcgtgcgcc | gcgtaaccaa | cgcgccgggg | ccgctcgctc | gttctgccca | ccgtgcgcta | 16680 |
| 1061 | ccaccccagc | atcctttaat | ccgtgtgctg | tgatactgtt | gcagagagat | ggctctcact | 16740 |
| 1062 | tgccgcctgc | gcatccccgt | tccgaattac | cgaggaagat | cccgccgcag | gagaggcatg | 16800 |
| 1063 | gcaggcagcg | gcctgaaccg | ccgccggcgg | cgggccatgc | gcaggcgcct | gagtggcggc | 16860 |
| 1064 | tttctgcccg | cgctcatccc | cataatcgcg | gcggccatcg | gcacgatccc | gggcatagct | 16920 |
| 1065 | tccgttgcgc | tgcaggcgtc | gcagcgccgt | tgatgtgcga | ataaagcctc | tttagactct | 16980 |
| 1066 | gacacacctg | gtcctgtata | tttttagaat | ggaagacatc | aattttgcgt | ccctggctcc | 17040 |
| 1067 | gcggcacggc | acgcggccgt | tcatgggcac | ctggaacgag | atcggcacca | gccagctgaa | 17100 |
| 1068 | cgggggcgcc | ttcaattgga | gcagtgtctg | gagcgggctt | aaaaatttcg | gctcgacgct | 17160 |
| 1069 | ccggacctat | gggaacaagg | cctggaatag | tagcacgggg | cagttgttga | gggaaaagct | 17220 |
| 1070 | caaagaccag | aacttccagc | agaaggtggt | ggacggcctg | gcctcgggca | ttaacggggt | 17280 |
| 1071 | ggtggacatc | gcgaaccagg | cagtgcagcg | cgagataaac | agccgtctgg | acccgcggcc | 17340 |
| 1072 | gcccacggtg | gtggagatgg | aagatgcaac | tcttccgccg | ccgaagggcg | agaagcggcc | 17400 |
| 1073 | gcggccagat | gcggaggaga | cgatcctgca | ggtggacgag | ccgccttcgt | acgaggaggc | 17460 |
| 1074 | cgtgaaggcc | ggcatgccca | ccacgcgcat | catcgcgcca | ctggccacgg | gtgtaatgaa | 17520 |
| 1075 | acccgccacc | cttgacctgc | ctccaccacc | cacgcccgct | ccaccgaagg | cagctccggt | 17580 |
| 1076 | tgtgcagccc | cctccggtgg | cgaccgccgt | gcgccgcgtc | cccgcccgcc | gccaggccca | 17640 |
| | | | | | | tgaagcgccg | |
| 1078 | ccgatgctat | tgagagagag | gaaggaggac | actaaaggga | gagcttaact | tgtatgtgcc | 17760 |
| 1079 | ttaccgccag | agaacgcgcg | aagatggcca | ccccctcgat | gatgccgcag | tgggcgtaca | 17820 |
| 1080 | tgcacatcgc | cgggcaggac | `gcctcggagt | acctgagccc | gggtctggtg | cagtttgccc | 17880 |
| 1081 | gcgccaccga | cacgtacttc | agcctgggca | acaagtttag | gaaccccacg | gtggccccga | 17940 |
| 1082 | cccacgatgt | gaccacggac | cggtcccagc | gtctgacgct | gcgctttgtg | cccgtggatc | 18000 |
| 1083 | gcgaggacac | cacgtactcg | tacaaggcgc | gcttcactct | ggccgtgggc | gacaaccggg | 18060 |
| 1084 | tgctagacat | ggccagcacg | tactttgaca | tccgcggcgt | cctggaccgc | ggtcccagtt | 18120 |
| 1085 | tcaaacccta | ctcgggcacg | gcttacaaca | gccttgcccc | caagggcgct | cccaatccca | 18180 |
| 1086 | gtcagtgggt | tgccaaagaa | aatggtcagg | gaactgataa | gacacatact | tatggctcag | 18240 |
| | | | | | | gatgaaaaag | |
| 1088 | ctgaggatgg | caaaaaagat | atttttgcaa | ataaacttta | tcagccagaa | cctcaagtag | 18360 |
| 1089 | gtgaagaaaa | ctggcaagag | tctgaagcct | tctatggagg | cagagctctt | aagaaagaca | 18420 |
| 1090 | caaaaatgaa | gccctgctat | ggctcatttg | caagacctac | caatgaaaaa | ggcggacaag | 18480 |
| 1091 | ctaaatttaa | gccagtggaa | gaggggcagc | aacctaaaga | ttatgacata | gatttggctt | 18540 |
| 1092 | tctttgacac | acctggaggc | accatcacag | gaggcacaga | cgaagaatat | aaagcagaca | 18600 |
| 1093 | ttgtgttgta | cactgaaaat | gtcaaccttg | aaaccccaga | cacccacgtg | gtatacaagc | 18660 |
| 1094 | caggaaaaga | ggatgacaqt | tcagaagtaa | atttgacaca | gcagtccatg | cccaacaggc | 18720 |
| | | | | | | | |

DATE: 02/04/2004

PATENT APPLICATION: US/10/645,883

TIME: 15:16:00

Input Set: A:\21366.txt

Output Set: N:\CRF4\01292004\J645883.raw

1095 ctaactacat tggcttcaga gacaactttg tgggactcat gtactacaac agtactggca 18780 1096 acatgggtgt gctggctggt caggcctctc aattgaatgc tgtggtcgac ttgcaagaca 18840 1097 gaaacaccga gctgtcttac cagctcttgc tagattctct gggtgacaga accagatact 18900 1098 tcagcatgtg gaactctgcg gtggatagct atgatccaga tgtcaggatc attgaaaatc 18960 1099 atggtqtgga agatgaactt ccaaactatt gcttcccatt gaatggcact ggcaccaatt 19020 1100 caacatatot tggcgtaaag gtgaaaccag atcaagatgg tgatgttgaa agcgagtggg 19080 1101 ataaagatga taccattgca aggcagaatc aaatcgccaa gggcaacgtc tttgccatgg 19140 1102 agatcaacct ccaggccaac ctgtggaaga gttttctgta ctcgaacgtg gccttgtacc 19200 1103 tgcccgactc ctacaagtac acgccggcca atgttacgct gcccgccaac accaacacct 19260 1104 acgagtacat gaacggccgc gtggtagccc cctcgctggt ggacgcctac atcaacatag 19320 1105 gcgcccgatg gtcgctggac cccatggaca acgtcaaccc cttcaaccac caccgcaatg 19380 1106 cgggcctgcg ctaccgctcc atgcttctgg gcaacggccg ctacgtgccc ttccacatcc 19440 1107 aagtqccca aaaqttettt qecatcaaqa acctgeteet geteceggge tectacacet 19500 1108 acgagtggaa cttccgcaag gatgtcaaca tgatcctgca gagttccctc qqcaacgacc 19560 1109 tgcgcgtcga cggcgcctcc gtccgcttcg acagcgtcaa cctctacgcc accttcttcc 19620 1110 ccatggcgca caacaccgcc tccaccctgg aagccatgct gcgcaacgac accaacgacc 19680 1111 agtectteaa egactaeete teggeegeea acatgeteta ecceateeeg geeaaggeea 19740 1112 ccaacgtgcc catctccatc ccctcgcgca actgggccgc ttttcgcggc tggagtttca 19800 1113 cccgtctgaa aaccaaggaa actccctccc tcggctcggg ttttgacccc tactttgtct 19860 1114 actegggete gatecectae ettgaeggae eettttaeet taaceaeace tteaagaaag 19920 1115 tetecateat attequetee teggteaget ageceggeaa egaceggetg eteacgeega 19980 1116 acgagttcga gatcaagcgc agcgtcgacg gggaaggcta caacgtggcc caatgcaaca 20040 1117 tgaccaagga ctggttcctc gtccagatgc tctcccacta caacatcggc taccagggct 20100 1118 tocacgtgcc cgagggctac aaggaccgca tgtactcctt cttccgcaac ttccagccca 20160 1119 tgagcaggca ggtggtcgat gagatcaact acaaggacta caaggccgtc accetgeect 20220 1120 tecageacaa caacteggge tteacegget acettgeace caccatgege caagggeage 20280 1121 cetaccege caactteece taccegetea teggecagae ageegtgeea teegteacee 20340-1122 agaaaagtet eetetgegac agggteatgt ggegeateee etteteeage aactteatgt 20400 1123 ccatgggege etteacegae etgggteaga acatgtteta egecaacteg geceaegege 20460 1124 tcgacatgac cttcgaggtg gaccccatgg atgagcccac cgtcctctat cttctcttcg 20520 1125 aaqtqttcqa cgtgqtcaqa gtqcaccaqc cgcaccgcgg cgtcatcgag gccgtctacc 20580 1126 tgcgcacgcc gttctccgcc ggaaacgcca ccacctaagc atgagcggct ccagcgaaag 20640 1127 agagetegeg tecategtge gegacetggg etgegggeet aetttttggg caeceaegae 20700 1128 acagcgattc ccgggctttc ttgccggcga caagctggcc tgcgccattg tcaacacggc 20760 1129 eggeegegag aceggaggeg tgeactgget egeettegge tggaaceege getegegeae 20820 1130 ctgctacatg ttcgacccct ttgggttctc ggaccgccgg ctcaagcaga tttacagctt 20880 1131 cqaqtacqaq gccatgctgc gccqaaqcqc cgtggcctct tcgcccgacc gctgtctcag 20940 1132 cctcgaacag tccacccaga ccgtgcaggg gcccgactcc gccgcctgcg gacttttctg 21000 1133 ttgcatgttc ttgcatgcct tcgtgcactg gcccgaccga cccatggacg ggaaccccac 21060 1134 catgaacttg ctgacggggg tgcccaacgg catgctacaa tcgccacagg tgctgcccac 21120 1135 cctcaggcgc aaccaggagg agctctatcg cttcctcgcg cgccactccc cttactttcg 21180 1136 ctcccaccgc gccgccatcg aacacgccac cgcttttgac aaaatgaaac aactgcgtgt 21240 1137 atctcaataa acagcacttt tattttacat gcactggagt atatgcaagt tatttaaaag 21300 1138 tcgaaggggt tctcgcgctc atcgttgtgc gccgcgctgg ggagggccac gttgcggtac 21360 1139 tggtacttgg gctgccactt gaactcgggg atcaccagtt tgggcactgg ggtctcgggg 21420 1140 aaggtetege tecaeataeg eeggeteate tgeagggege eeageatgte eggggeggat 21480 1141 atcttgaaat cgcagttggg accggtgctc tgcgcgcgcg agttgcggta cacggggttg 21540 1142 cagcactgga acaccatcag actggggtac tttacgctgg ccagcacgct cttgtcgctg 21600 1143 atctgatect tgtccagate eteggegttg eteaegeega atggggteat ettgeaeagt 21660

PATENT APPLICATION: US/10/645,883

DATE: 02/04/2004 TIME: 15:16:00

Input Set : A:\21366.txt

| 1144 | tggcgaccca | ggaatggcac | gctctgaggc | ttgtggttac | actcgcagtg | cacgggcatc | 21720 |
|------|------------|------------|------------|------------|------------|------------|-------|
| 1145 | agcatcatcc | ccgcgccgcg | ctgcatattc | gggtagaggc | cttgacaaag | gccgtgatct | 21780 |
| 1146 | gcttgaaagc | ttgttgggcc | ttggccccct | cgctgaaaaa | caggccgcag | ctcttcccgc | 21840 |
| 1147 | tgaactggtt | attcccgcac | ccggcatcct | gcacgcagca | gcgcgcgtca | tggctggtca | 21900 |
| 1148 | gttgcaccac | gcttcttccc | cagcggttct | gggtcacctt | ggctttgctg | ggttgctcct | 21960 |
| 1149 | tcaacgcgcg | ctgcccgttc | tcgctggtca | catccatctc | caccacgtgg | tccttgtgga | 22020 |
| 1150 | tcatcaccgt | tccatgcaga | cacttgagct | ggccttccac | ctcggtgcag | ccgtgatccc | 22080 |
| 1151 | acagggcact | gccggtgcac | tcccagttct | tgtgcgcgat | cccgctgtgg | ctgaagatgt | 22140 |
| 1152 | aaccttgcaa | gaggcgaccc | atgatggtgc | taaagctctt | ctgggtggtg | aaggttagtt | 22200 |
| 1153 | gcagaccgcg | ggcctcctcg | ttcatccagg | tctggcacat | cttttggaag | atctcggtct | 22260 |
| 1154 | gctcgggcat | gagcttgtaa | gcatcgcgca | ggccgctgtc | gacgcggtaa | cgttccatca | 22320 |
| 1155 | gcacgttcat | ggtatccatg | cccttttccc | aggacgagac | cagaggcaga | ctcagggggt | 22380 |
| 1156 | tgcgcacgtt | caggacaccg | ggggtckcgg | gctcgacgat | acgttttccg | tccttgcctt | 22440 |
| 1157 | ccttcaacag | aaccggaggc | tggctgaatc | ccactcccac | aatcacggca | tcttcctggg | 22500 |
| 1158 | gcatctcttc | gtcggggtct | accttggtca | catgcttggt | ctttctggct | tgcttctttt | 22560 |
| 1159 | ttggagggct | gtccacgggg | accacgtcct | ctcggaagac | ccggagccca | cccgctgata | 22620 |
| 1160 | ctttcggcgc | ttggtgggca | gaggaggtgg | cggcggcgag | gggctcctct | cgtgctccgg | 22680 |
| 1161 | cggatagcgc | gccgacccgt | ggccccgggg | cggagtggcc | tctcgctcca | tgaaccggcg | 22740 |
| 1162 | cacqtctgac | tgccgccggc | cattgtttcc | taggggaaga | tggaggagca | gccgcgtaag | 22800 |
| 1163 | caggagcagg | aggaggactt | aaccacccac | gagcaaccca | aaatcgagca | ggacctgggc | 22860 |
| 1164 | ttcgaagagc | cggctcgtct | agaaccccac | aggatgaaca | ggagcacgag | caagacgcag | 22920 |
| 1165 | qccaggagga | gaccgacgct | gggctcgagc | atggctacct | gggaggagag | gaggatgtgc | 22980 |
| 1166 | tgctgaaaca | cctgcagcgc | cagtccctca | tcctccggga | cgccctggcc | gaċcggagcg | 23040 |
| 1167 | aaacccccct | cagcgtcgag | gagctgtgtc | gggcctacga | gctcaacctc | ttctcgccgc | 23100 |
| 1168 | gcgtgccccc | caaacgccag | cccaacggca | cctgcgagcc | caacccgcgt | ctcaacttct | 23160 |
| 1169 | atcccgtctt | tgcggtcccc | gaggcccttg | ccacctatca | catctttttc | aagaaccaaa | 23220 |
| 1170 | agatccccgt | ctcctgccgc | gccaaccgca | cccgcgccga | cgcgctcctc | gctctggggc | 23280 |
| 1171 | ccggcgcgcg | catacctgat | attgcttccc | tggaagagtg | cccaaaatct | tcgaagggct | 23340 |
| 1172 | cggtcgggac | gagacgcgcg | cggcgaaacg | ctctgaaaga | aacagcagag | gaagagggtc | 23400 |
| 1173 | acactagcgc | cctggtagag | ttggaaggcg | acaacgccag | gctggccgtg | ctcaagcgca | 23460 |
| 1174 | gcgttgagct | cacccacttc | gcctaccccg | ccgtcaacct | cccgcccaag | gtcatgcgtc | 23520 |
| 1175 | gcatcatgga | tcagctaatc | atgccccaca | tcgaggccct | cgatgaaagt | caggagcagc | 23580 |
| 1176 | gccccgagga | cacccggccc | gtggtcagcg | atgagcagct | tgcgcgctgg | cttggtaccc | 23640 |
| 1177 | gcgaccccca | ggccctggag | cagcggcgca | agctcatgct | ggccgtggtc | ctggtcaccc | 23700 |
| 1178 | tcgagctcga | atgcatgcga | cgctttttca | gcgaccccga | gacctgcgca | aggtcgagga | 23760 |
| 1179 | gacctgcact | acacttttag | cacgtttcgt | caggcaggca | tgcaagatct | ccaacgtgga | 23820 |
| 1180 | gctgaccaac | tggtctcctg | cctgggaatc | ctgcacgaga | accgcctggg | gcagacagtg | 23880 |
| 1181 | ctccactcga | ccctgaaggg | cgaggcgcgg | cgggactatg | tccgcgactg | cgtctttctc | 23940 |
| 1182 | tttctctgcc | acacatggca | agctgccatg | ggcgtgtggc | agcagtgtct | cgaggacgag | 24000 |
| 1183 | aacctgaagg | agctggacaa | gcttcttgct | agaaacctca | aaaagctgtg | gacgggcttt | 24060 |
| 1184 | gacgagcgca | ccgtcgcctc | ggacctggcc | gagatcgtcc | tcccccgagc | gcctgaggca | 24120 |
| 1185 | gacgctgaaa | ggcgggctgc | ccgacttcat | gagccagagc | atgttgcaaa | actaccgcac | 24180 |
| 1186 | tttcattctc | gagcgatctg | ggatgctgcc | cgccacctgc | aacgccttcc | cctccgactt | 24240 |
| 1187 | tgtcccgctg | agctaccgcg | agtgtccccc | gccgctgtgg | agccactgct | acctcttgca | 24300 |
| 1188 | gctggccaac | tacatcgcct | accactcgga | tgttatcgag | gacgtgagcg | gcgaggggct | 24360 |
| 1189 | gctagagtgc | cactgccgct | gcaacctgtg | ctctccgcac | cgctcctggt | ctgcaacccc | 24420 |
| 1190 | cagctcctga | gcgagaccca | ggtcatcggt | accttcgagc | tgcaaggtcc | gcaggagtcc | 24480 |
| 1191 | accgctccgc | tgaaactcac | gccggggttg | tggacttccg | cgtacctgcg | caaatttgta | 24540 |
| 1192 | cccgaggact | accacgeeca | tgagataaag | ttcttcgagg | accaatcgcg | cccgcagcac | 24600 |
| | | _ | | | | | |

DATE: 02/04/2004

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/645,883

Input Set : A:\21366.txt

Output Set: N:\CRF4\01292004\J645883.raw

1193 geggatetea eggeetgegt cateacceag ggegegatee tegeceaatt geaegeeate 24660 1194 caaaaatccc gccaagagtt tcttttgaaa aagggtagag gggtctatct ggacccccag 24720 1195 acgggcgaag tgctcaaccc gggtctcccc cagcatgccg aagaagaaca ggagccgcta 24780 1196 gtggaagaga tggaagaaga atgggacagc cagcagaaga agacgaatgg gaagaagaga 24840 1197 cagaagaaga agaattggaa aagtggaaga agagcagcac agacaccgtc gccgcaccat 24900 1198 ccgcgccgca gcccggcggt cacggataca actcgcagtc cgccaagctc ctcgtagatg 24960 1199 gatcgagtga aggtgacggt aagcacgagc ggcagggcta cgaatcatgg aggcccacaa 25020 1200 agegggatea tegeetgett geaagaetge ggggggaaea tegtttegee egeegetate 25080 1201 tgctcttcca tcgcggggtg aacatccccc gcaacgtgtt gcattactac cgtcaccttc 25140 E--> 1202 acagetaaga aaaaateaga gtaagaggag tegeeggagg aggentgagg ategeggega 25200 1203 acgagecatt gaccaccagg gagetgagga ateggatett ecceaetett tatgecattt 25260 1204 ttcagcagag tcgaggtcag cagcaagagc tcaaagtaaa aaaccggtct ctgcgctcgc 25320 1205 tcacccgcag ttgcttgtac cacaaaaacg aagatcagct gcagcgcact ctcgaagacg 25380 1206 ccgaggetet gttecaeaag taetgegege teaetettaa agaetaagge gegeeeaeee 25440 1207 ggaaaaaagg cgggaattac ctcatcgcca ccatgagcaa ggagattccc accccttaca 25500 1208 tgtggagcta tcagececag atgggeetgg eegegggege eteceaggae taeteeacee 25560 1209 gcatgaactg gctcagtgcc ggcccctcga tgatctcacg ggtcaacggg gtccgtaacc 25620 1210 atcgaaacca gatattgttg gagcaggcgg cggtcacctc aacgcccagg caaagctcaa 25680 1211 cccgcgtaat tggccctcca ccctggtgta tcaggaaatc cccgggccga ctaccgtact 25740 1212 acttccgcgt gacgcactgg ccgaagtccg catgactaac tcaggtgtcc agctggccgg 25800 1213 cggcgcttcc cggtgcccgc tccgcccaca atcgggtata aaaaccctgg tgatacgagg 25860 1214 cagaggcaca cagctcaacg acgagttggt gagctcttca atcggtctgc gaccggacgg 25920 1215 agtgttccaa ctagccggag ccgggagatc gtccttcact cccaaccagg ctacctgacc 25980 1216 ttgcagagca gctcttcgga gcctcgctcc ggaggcatcg gaaccctcca gtttgtggag 26040 1217 gagtttgtgc cctcggtcta cttcaacccc ttctcgggat cgccaggcct ctacccggac 26100 1218 gagttcatac cgaacttcga cgcagtgaga gaagcggtgg acggccacga ctgaatgtct 26160 1219 tatggtgact cggctgaget cgctcggttg aggcacctag accactgccg ccgcctgcgc 26220 1220 tgcttcgccc gggagagctg cggacttatc tactttgagt ttcccgagga gcaccccaac 26280 1221 ggccctgcac acggagtgcg gatcaccgta gagggcacca ccgagtctca cctggttagg 26340 1222 ttetteacce ageaaccett cetggtegag egggaceggg gaggeaceae etaeacegte 26400 1223 tactgcatct gtccaacccc gaagttgcat gagaattttt gttgtactct gtgtgctgag 26460 1224 tttaataaaa gctaaactcc tacaatactc tgggatcccg tgtcgtcgca ctcgcaacaa 26520 1225 gaccttcaac ctcaccaacc agactgaggt aaaattcaac tgcagaccgg gggacaaata 26580 1226 catcetetgg ctttttaaaa acaetteett egeagtetee aacgeetgeg eeaacgaegg 26640 1227 tattgaaata cccaacaacc ttaccagtgg actaacttat actaccagaa agactaagct 26700 1228 agtactctac aatccttttg tagagggaac ctaccactgc cagagcggac cttgcttcca 26760 1229 cactttcact ttggtgaacg ttaccgacag cagcacagcc gctacagaaa catctaacct 26820 1230 tetttttgat actaacacte etaaaacegg aggtgagete tgggtteeet etetaacaga 26880 1231 ggggggtaaa catattgaag cggttgggta tttgatttta ggggtggtcc tgggtgggtg 26940 1232 catagoggtg ctgtattacc ttccttgctg gatcgaaatc aaaatcttta tctgctgggt 27000 1233 cagacattgt tgggaggaac catgaagggg ctcttgctga ttatcctttc cctggtgggg 27060 1234 ggtgtactgt catgccacga acagccacga tgtaacatca ccacaggcaa tgagaggagt 27120 1235 gtgatatgca cagtagtcat caaatgcgag catacatgcc ctctcaacat cacattcaaa 27180 1236 aaccgtacca tgggaaatgc atgggtgggc gactgggaac caggagatga gcagaactac 27240 1237 acggtcactg tccatggtag caatggaaat cacacttttg gtttcaaatt catttttgaa 27300 1238 gtcatgtgtg atatcacact gcatgtggct agacttcatg gcttgtggcc ccctaccaag 27360 1239 gataacatgg ttgggttttc tttggctttt gtgatcatgg cctgtgcaat gtcaggtctg 27420 1240 ctggtagggg ctttagtgtg gttcctaaag cgcaagccta ggtatggaaa tgaggagaag 27480 1241 gaaaaattgc tataaatctt ttctcttcgc agaaccatga atacagtgat ccgtatcgtg 27540

P. 15 for enor explanation

PATENT APPLICATION: US/10/645,883

DATE: 02/04/2004 TIME: 15:16:00

Input Set : A:\21366.txt

Output Set: N:\CRF4\01292004\J645883.raw

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Input Set : A:\21366.txt

Output Set: N:\CRF4\01292004\J645883.raw

1291 gcatcgcctc acctatgaga tgccccagca gaagcagaag ttcacctgca tggtgggcgt 30540 1292 caaccccata gtcatcaccc agcagtcggg cgagaccaac gqctgcatcc actgctcctg 30600 1293 cgaaagcccc gagtgtatct actcccttct caagaccctt tgcggactcc gcgacctcct 30660 1294 coccatgaac tgatgttgat taaaaaccaa aaaaaacaat cagccccttc ccctatccca 30720 1295 aattactcgc aaaaataaat cattggaact aatcatttaa taaagatcac ttacttgaaa 30780 1296 totgaaagta tgtototggt gtagttgtto agcagcacct oggtaccoto otoccaacto 30840 1297 tggtactcca gtctccggcg ggcggcgaac tttctccaca ccttgaaagg gatgtcaaat 30900 1298 teetggteea caattiteat tgtetteeet eteagatgte aaagaggete egggtggaag 30960 1299 atgacttcaa ccccgtctac ccctatggct acgcgcggaa tcagaatatc cccttcctca 31020 1300 ctccccctt tgtctcctcc gatggattca aaaacttccc ccctggggtc ctgtcactca 31080 1301 aactggctga cccaatcacc atagccaatg gtgatgtctc actcaaggtg ggagggggac 31140 1302 ttactttgca agaaggaagt atgactgtag accetaagge teeettgcaa ettgcaaaca 31200 1303 ataaaaaact tgagcttgtt tatgttgatc catttgaggt tagtgccaat aaacttagtt 31260 1304 taaaagtagg acatggatta aaaatattag atgacaaaag tgctggaggg ttgaaagatt 31320 1305 taattqqcaa acttqtqqtt ttaacaqqqa aaqqaataqq cactqaaaat ttqcaaaata 31380 1306 cagatggtag cagcagagga attggtataa gtgtaagagc aagagaaggg ttaacatttg 31440 1307 acaatgatga atacttggta gcatggaacc caaagtatga cacgcgcaca ctttggacaa 31500 1308 caccagacac atctcctaat tgcaggattg ataaggagaa ggattcaaaa ctcactttgg 31560 1309 tacttacaaa gtgtggaagt caaatattag ctaatgtgtc tttgattgtg gtgtcaggaa 31620 1310 aatatcaata catagaccac gctacaaatc caactcttaa atcatttaaa ataaaacttc 31680 1311 tttttgataa taaaggtgta cttctcccaa gttcaaacct tgattccaca tattggaact 31740 1312 ttagaagtga caatttaact gtatctgagg catataaaaa tgcagttgaa tttatgccta 31800 1313 atttggtagc ctacccaaaa cctaccactg gctctaaaaa atatgcaagg gatatagtct 31860 1314 atgggaacat atatcttgga ggtttggcat atcagccagt tgtaattaag gttactttta 31920 1315 atqaaqaaqc agataqtqct tactctataa catttgaatt tgtatggaat aaagaatatg 31980 1316 ccagggttga atttgaaacc acttccttta ccttctccta tattgcccaa caataaaaga 32040 1317 ccaataaacg tgttttttat ttcaaatttt atgtatcttt attgattttt acaccagcgc 32100 1318 gagtagtcaa tctcccacca ccaqcccatt tcacagtgta cacggttctc tcagcacggt 32160 1319 ggccttaaat aaggaaatgt tetgattatt gegggaactg gacttggggt etataateea 32220 1320 cacagtttcc tgacgagcca aacggggatc ggtgattgaa atgaagccgt cctctgaaaa 32280 1321 gtcatccaaq cqggcctcac agtccaggtc acagtctggt gqaacgagaa gaacgcacag 32340 1322 atteatacte ggaaaacagg atgggtetgt geetetecat cagegeeete ageagtetet 32400 1323 gccgccgggg ctcggtgcgg ctgctgcaaa tgggatcggg atcacaagtc tctctaacta 32460 1324 tgateceaac ageetteage ateagtetee tggtgegteg ageacageac egeateetga 32520 1325 tetetgecat gtteteacag taagtgeage acataateae catgttatte ageageecat 32580 1326 aattcagggt gctccagcca aagctcatgt tggggatgat ggaacccacg tgaccatcgt 32640 1327 accagatgeg geagtatate aggtgeetge eceteatgaa cacaetgeee atatacatga 32700 1328 tetetttqqq catqtttetq tttacaatet ggeggtacea ggggaagege tggttgaaca 32760 1329 tgcacccgta aatgactctc ctgaaccaca cggccagcag ggtgcctccc gcccgacact 32820 1330 gcagggagcc aggggatgaa cagtggcaat gcaggatcca gcgctcgtac ccgctcacca 32880 1331 tctgagctct taccaagtcc agggtagcgg ggcacaggca cactgacata catctttta 32940 1332 aaatttttat ttcctctgtg gtgagqatca tatcccaggg gactggaaac tcttggaqca 33000 1333 gggtaaagcc agcagcacat ggtaatccac ggacagaact tacattatga taatctgcat 33060 1334 gatcacaatc gggcaacagg ggatgttgat cagtcagtga agccctggtt tcatcatcag 33120 1335 atcgtggtaa acgggccctg cgatatggat gatggcggag cgagctggat tgaatetcgg 33180 1336 tttgcattgt agtggattct cttgcgtacc ttgtcgtact tctgccagca gaaatgggcc 33240 1337 cttgaacage atatacceet cetgeggeeg teettteget getgeegete agteateeaa 33300 1338 ctgaagtaca tccattctcg aagattctgg agaagttcct ctgcatctga tgaaataaaa 33360 1339 aacccgtcca tgcgaattcc cctcatcaca tcagccagga ctctgtaggc catccccatc 33420

DATE: 02/04/2004

PATENT APPLICATION: US/10/645.883

TIME: 15:16:00

Input Set : A:\21366.txt

Output Set: N:\CRF4\01292004\J645883.raw

1340 cagttaatgc tgccttgtct atcattcaga gggggcggtg gcaggattgg aagaaccatt 33480 1341 tttattccaa acggtctcga aggacgataa agtgcaagtc acgcaggtga cagcgttccc 33540 1342 ctccgctgtg ctggtggaaa cagacagcca ggtcaaaacc cactctattt tcaaggtgct 33600 1343 cgaccgtggc ttcgagcagt ggctctacgc gtacatccag cataagaatc acattaaagg 33660 1344 ctggccctcc atcgatttca tcaatcatca ggttacattc ctgcaccatc cccaggtaat 33720 1345 teteattttt ecageettgg attateteta caaattgttg gtgtaaatee acteegeaca 33780 1346 tgttgaaaag ctcccacagt gccccctcca ctttcataat caggcagacc ttcataatag 33840 1347 aaacagatcc tgctgctcca ccacctgcag cgtgttcaaa acaacaagat tcaataaggt 33900 1348 tetgecetee gecetgaget egegeeteaa tgteagetge aaaaagteae ttaagteetg 33960 1349 ggccactaca gctgacaatt cagagccagg gctaagcgtg ggactggcaa gcgtgaggga 34020 1350 aaactttaat geteeaaage tageaceeaa aaactgeatg etggaataag etetettigt 34080 1351 gtctccggtg atgccttcca aaatgtgagt gataaagcgt ggtagttttt tctttaatca 34140 1352 tttgcgtaat agaaaagtcc tgtaaataag tcactaggac cccagggacc acaatgtggt 34200 1353 agettacace gegtegetga aageatggtt agtagagatg agagtetgaa aaacagaaag 34260 1354 catgcgctaa actaaggtgg ctattttcac tgaaggaaaa atcactcttt ccagcagcag 34320 1355 ggtacccact gggtggccct tgcggacata caaaaatcgg tccgtgtgat taaaaagcag 34380 1356 cacagtaagt teetgtette tteeggeaaa aateacateg gaetgggtta gtatgteeet 34440 1357 ggcatggtag tcattcaagg ccataaatct gccctgatat ccagtaggaa ccagcacact 34500 1358 cacttttagg tgaagcaata ccaccccatg cggaggaatg tggaaagatt cagggcaaaa 34560 1359 aaaattatat ctattgctag cccttcctgg acgggagcaa tcctccagga ctatctatga 34620 1360 aagcatacag agattcagcc atagctcagc ccgcttacca gtagacaaag agcacagcag 34680 1361 tacaagegee aacageageg actgactace cactgactta geteeetatt taaaggeace 34740 1362 ttacactgac gtaatgacca aaggtctaaa aaccccgcca aaaaaacaca cacgccctgg 34800 1364 teegggttee eacgttacgt eacttttgee ettacatgta acttagtegt agggegeeat 34920 1365 cttgcccacg tccaaaatgg cttacatgtc cagttacgcc tccgcggcga ccgttagccg 34980 1366 tgcgtcgtga cgtcatttgc atcaacgttt ctcggccaat cagcagtagc cccgccctaa 35040 1367 atttaaaacc tcatttgcat attaactttt gtttactttg tggggtatat tattgatgat 35100 35101 1368 q

10/645,883

from Sequence 9 gqtaagttcc ggaaccacca cagaaaaaga caccattttt ctctcaaaca tqtctqcqqg 34920

tgthttacaa caggaaaaac aaccettata agcataagac ggactacgge catgeeggeg 35040 tgaccgtaaa aaaactggtc accgtgatta aaaagcacca ccgacagttc ctcggtcatg 35100 teeggagtea taatgtaaga eteggtaaae acateaggtt ggttaacate ggteagtget 35160 aaaaagcgac cgaaatagcc cgggggaata catacccgca ggcgtagaga caacattaca 35220 gcccccatag gaggtataac aaaattaata ggagagaaaa acacataaac acctgaaaaa 35280 contectged tagginaaat ageacceted egetecagaa caacatadag egettecada 35340 geggeageea taacagteag cettaceagt aaaaaaaeet attaaaaaae accaetegae 35400 acggcaccag ctcaatcagt cacagtgtaa aaagggccaa gtacagagcg agtatatata 35460 ggactaaaaa atgacqtaac ggttaaagtc cacaaaaacc acccaqaaaa ccqcacqcqa 35520 acctacgece agaaacgaaa gecaaaaaac eeacaactte etcaaatett cactteegtt 35580 ttcccacgat acgtcacttc ccattttaaa aaaaaactac aattcccaat acatqcaaqt 35640 tactccgccc taaaacctac gtcacccgcc ccgttcccac gccccgcgcc acgtcacaaa 35700

ctccaccccc tcattatcat attggcttca atccaaaata aggtatatta ttgatgatg 35759

VARIABLE LOCATION SUMMARY

PATENT APPLICATION: US/10/645,883

DATE: 02/04/2004 TIME: 15:16:01

nor egiloration

Input Set : A:\21366.txt

Output Set: N:\CRF4\01292004\J645883.raw

Use of n's or Xaa's (NEW RULES):

Use of n's and/or Xaa's have been detected in the Sequence Listing.
Use of <220> to <223> is MANDATORY if n's or Xaa's are present.
in <220> to <223> section, please explain location of n or Xaa, and which residue n or Xaa represents.

Seq#:6; N Pos. 25185 Seq#:9; N Pos. 34984

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/645,883

DATE: 02/04/2004 TIME: 15:16:01

Input Set : A:\21366.txt

Output Set: N:\CRF4\01292004\J645883.raw

L:1202 M:340 E: (46) "n" or "Xaa" used: Feature required, for SEQ ID#:6 L:3232 M:258 W: Mandatory Feature missing, <221> Tag not found for SEQ ID#:9 L:3232 M:258 W: Mandatory Feature missing, <222> Tag not found for SEQ ID#:9 L:3232 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:9 after pos.:34980